

### ABSTRACT OF THE DISCLOSURE

A method for gas pressurizing of parts for leakage detection including an enhanced process for reliably achieving full gas pressurization of the part to a predetermined test pressure value and monitoring for various errors which may occur during pressurization, and after pressure and temperature settling, taking an instantaneous snapshot pressure measurement and calculating two pressure thresholds. A snapshot pressure measurement is compared to a slam threshold value after termination of the slam time period and if pressure remains above the threshold signaling "good" and terminating the test. If the measured pressure reads below the slam threshold during slam test then the slam test terminates and the standard threshold test will then be performed repeatedly over the total test time which will yield a good result unless the pressure goes below the standard threshold during total test time which will then yield a bad part result.